

ABSTRACT

A liquid level sensor for conductive liquids having a virtual bias ring to prevent false "full" indications. The sensor is an inexpensive conductive probe that can be installed in any tank or container used to contain a conductive liquid. The build up of residue such as conductive fluid that fails to drain on the inside of the container wall and probe pieces can cause a short between the probe and ground. This situation will result in falsely showing that the level of the liquid being measured is at least at the minimum predetermined requirement even though the actual level may be far less than that amount.

The bias ring is a virtual "ring" that is provided around the insulating base of the sensing probe between the probe tip and the top inside of the tank. The probe is then given a charge (positive for negative ground systems) which interrupts the current path between the sensing tip of the probe and ground via the conducting residue. Consequently, the sensor will read correctly despite the conductive residue that may be present.